

## ABSTRACT OF THE DISCLOSURE

A novel medium, method and system for proving a turbine meter for use with natural gas. The novel test medium is a gas having the following characteristics: (a) Density  $> 2 \times$  Density of Natural Gas; (b) Dynamic Viscosity  $<$  Dynamic Viscosity of Natural Gas; and (c) Ideal gas behavior for approximately  $15^{\circ}\text{C} < T < 25^{\circ}\text{C}$  and  $1 \text{ bar} < P < 50 \text{ bar}$ . The method and system make use of the novel test medium. Also disclosed is a novel method and system for cooling a test medium circulating in a turbine meter prover system involving injecting liquefied test medium into said circulating test medium.